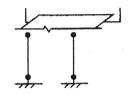
Plastic hinges in inspectable locations or elastic design of columns. Abutment resistance not required as part of ERS

Knock-off backwalls permissible

Transverse Response

3 Permissible



- Plastic hinges in inspectable locations or elastic design of columns
- Abutment not required in ERS, breakaway shear keys permissible



- Abutment required to resist the design earthquake electrically.
- Longitudinal passive soil pressure shall be less than 0.70 of the value obtained using the procedure given in Article 5.2.3

Figure 3.3-1a Permissible Earthquake Resisting Systems (ERS).

Longitudinal Response

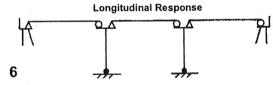
- Isolation bearings accommodate full displacement
- · Abutment not required as part of ERS

Permissible Upon Approval

Transverse or Longitudinal Response

- Plastic hinges in inspectable locations or elastic design of columns
- Isolation bearings with or without energy dissipaters to limit overall displacements

Permissible Upon Approval



- Multiple simply-supported spans with adequate support lengths
- Plastic hinges in inspectable locations or elastic design of columns

Not permissible

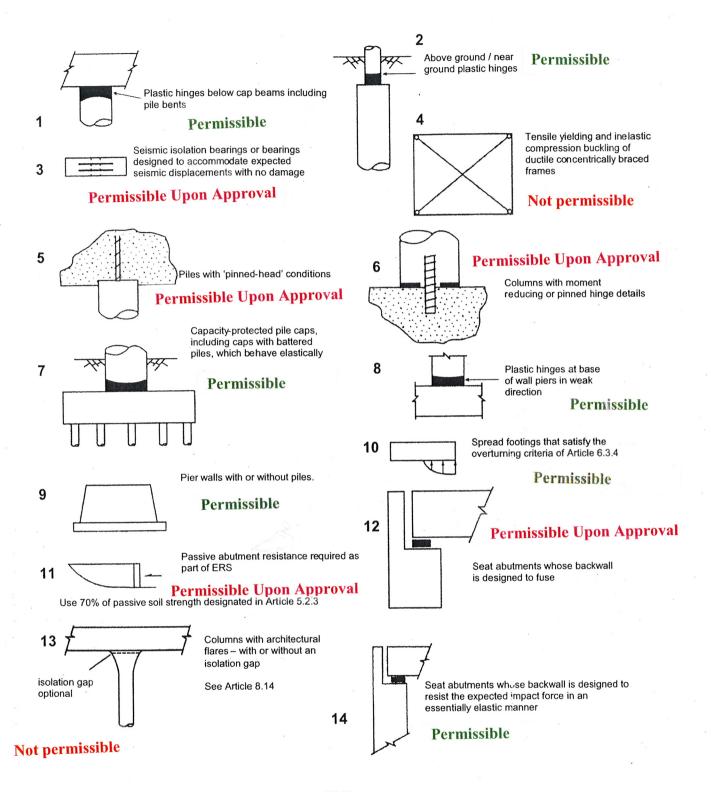


Figure 3.3-1b Permissible Earthquake Resisting Elements (ERE).

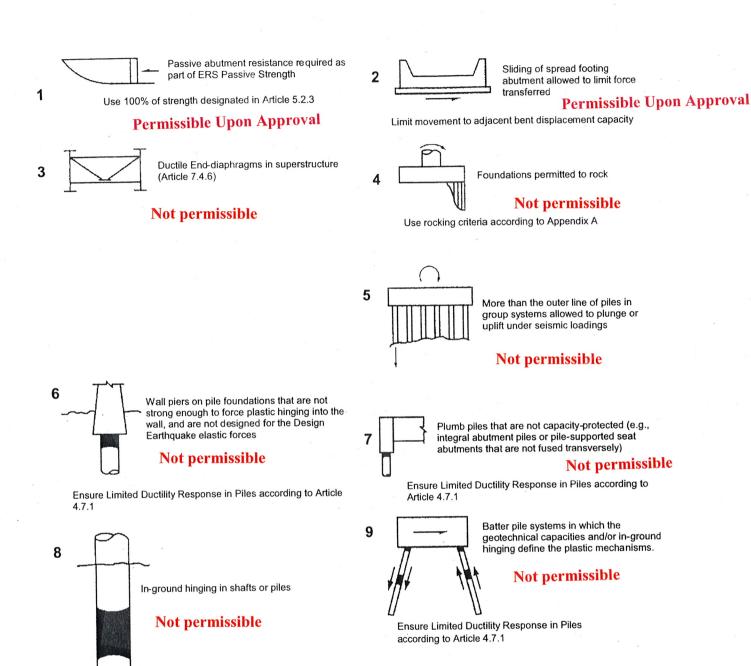


Figure 3.3-2 Permissible Earthquake Resisting Elements that Require Owner's Approval.

Ensure Limited Ductility Response in Piles according to Article

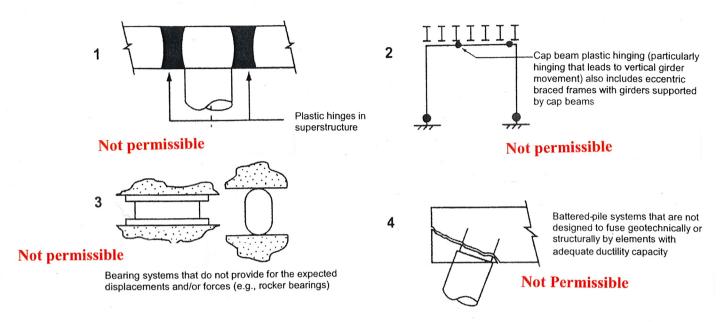


Figure 3.3-3 Earthquake Resisting Elements that are not Recommended for New Bridges.